REMARKS/ARGUMENTS

Claims 1-13 are currently pending. Claims 1 and 2 were allowed in the outstanding office action. Claims 3-10 were rejected in the outstanding office action. Claims 1-10 have been amended. Claims 11-13 have been added. Although allowed in the outstanding office action, claims 1 and 2 have been amended herein to improve their clarity. Likewise, claims 2-10 have also been amended to improve clarity as well as for the reasons discussed below. Support for these amendments can be found throughout the specification and claims as originally filed. Applicants submit that no new matter has been added as a result of this amendment.

At the outset, Applicants thank the Examiner for the allowance of claims 1 and 2 in the outstanding office action. Reconsideration of the outstanding rejections is respectfully requested in light of the amendments to the claims and the remarks set forth below.

Rejections Under 35 U.S.C. § 112, 2nd Paragraph

35 U.S.C. § 112, 2nd paragraph recites:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 4-7 were rejected as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response, claim 3 has been amended to remove reference to the compound of formula (Ia) and new claim 11 has been added to depend from claim 2. Claim 11 is similar to claim 3, except for reference to the compound of formula (Ia).

In addition, claim 4 has been amended to depend from claim 1 and new claim 12 has been added to claim similar subject matter as claim 4, with the exception of reference to a compound of formula (Ia) as set forth in claim 2.

Claims 5 and 6 have been amended to depend from new claim 13, which depends from new claim 12. New claim 13 further limits the fluoroalkyl ligand or radiotracer to a [^{18}F]fluoroalkylated radioligand or [^{18}F]-radiotracer and addresses the Offices concerns with respect to a broader range and a narrow range present in the same claim.

Regarding claims 4-6, claim 4 has been amended to clearly recite a process step, and therefore is not indefinite. New claim 12 recites a similar process step with respect to formula (Ia). Claim 7 has been amended to depend from claim 2, which recites a compound of formula (IIa). Further, Claim 7 has been amended to recite "^{18}F" as the fluorine source.

Applicants respectfully submit that in light of the above, the rejections set forth under 35 U.S.C. § 112, 2nd paragraph have been overcome and should be withdrawn.

Rejections Under 35 U.S.C. § 102(b)

35 U.S.C. § 102(b) recites:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States,

In the outstanding office action, claim 8 was rejected as being anticipated by CAPLUS abstract Nos. 1994:30806, 1977:42771, 1976:150698, and 1978:121329. Claim 10

was rejected as being anticipated by CAPLUS abstract Nos. 1999:304473, 1996-446320, and 1998:352139.

Applicants respectfully disagree with and traverse this rejection. Anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. *In re King*, 231 USPQ 136, 138 (Fed. Cir. 1986). *Moba B.V. v. Diamond Automation Inc.*, 66 USPQ2d 1429, 1440 (Fed. Cir. 2003). Applicants respectfully submit that the Office has failed to show that all of the claim limitations are taught by the prior art.

Specifically, claim 8 recites that R'' is a Solid Support-Linker group. The cited reference merely recite compounds where R" is an alkyl group. Nowhere to these references teach or suggest the presence of a linker or a solid support. Therefore Claim 8 is patentable over CAPLUS abstract Nos. 1994:30806, 1977:42771, 1976:150698, and 1978:121329. Applicants respectfully request that this rejection be withdrawn.

Regarding claim 10, in the compounds disclosed by the references, R" is methyl or butyl, n=4 or 6, and L= $-SO_2CH_3$ or $-SO_2$(*para*-methyl)phenyl. Proviso B in claim 10 excludes such compounds from the claim. Proviso B recites "(b) when R'' is C_{1-6} alkyl or C_{1-6} haloalkyl and n is 2 to 6, L is not $-OSO_2CH_3$ or $-OSO_2$(*para*-methyl)phenyl." Thus, the compounds of CAPLUS abstract Nos. 1999:304473, 1996-446320, and 1998:352139 are excluded from the claim. Therefore, Claim 10 is patentable over the cited references and this rejection should also be withdrawn.

Rejection under 35 U.S.C. 103(a)

35 U.S.C. § 103(a) recites:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Pukhnarevich et al. (Collection of Czech. Chem. Communic., 1974) ("Pukhnarevich") and/or Vcelak et al (Collection of Czech. Comm. Communic, 1976) ("Vcelak"). Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over CAPLUS abstract Nos. 1994:30806, 1977:42771, 1976:150698, and 1978:121329.

Regarding claim 7, the Office states that the difference between the cited references and claim 7 is the presence of a phase transfer catalyst. The Office then states:

> However, this does not constitute a patentable limitation of the instant claim or the prior art. The examiner contends that while not explicitly taught by either reference, it would have been obvious to a person having ordinary skill in the art to add a phase transfer agent to the process taught by Pukhnaravich et al or Vcelak et al, since a person of ordinary skill would have recognized that the compound(s) used as a fluoride source, i.e., potassium fluoride, would not have readily dissolved in the organic solvent conditions employed in the reference(s). Such a person would therefore have been motivated to employ a phase transfer agent such as a crown ether, which his a class of well-known macrocyclic phase transfer agents.

Applicants respectfully disagree and traverse this rejection. As noted above, Claim 7 has been amended to a [^{18}F]fluoridation process for the preparation of a compound of formula (IIa). Pukhnarevich and Vcelak fail to describe the reaction of a compound of formula (IV) with radioactive fluoride. The claimed process is the first application of this

chemistry in the field of [^{18}F]fluoridation and provides useful intermediates for the synthesis of [^{18}F]fluorohaloalkanes. Neither prior art reference teaches or provides any reason as to why one of ordinary skill in the art would employ an 18-Fluorine source in the synthesis of the reference compounds. Indeed, neither reference mentions the fluorinated silane compounds as being useful in biological applications or as intermediates in the synthesis of fluoroalkanes. Therefore, Applicants respectfully request that the that the rejection of claim 7 under 35 U.S.C. § 103(a) be withdrawn.

Regarding claim 9, the Office states:

> The instant claim is rendered obvious over the above listed references since said references disclose the same compounds, but with normal fluorine, 19-Fluorine. It would have been obvious to a person of ordinary skill in the art to exchange 19-Fluorine taught [in] said references, with 18-Fluorine, since it is well-known in the art that using 18-Fluorine in biomolecules containing fluorine is an important noninvasive technique for studying living tissue by positron emission topography.

Applicants respectfully disagree and traverse this rejection. As set forth in the Office Action, the compounds of claim 9 differ from those in the cited art due to the presence of [^{18}F]fluoro rather than [^{19}F]fluoro. However, the present invention is the first time that it was appreciated that the [^{18}F]fluoro could be prepared and used as [^{18}F]fluoroalkylating agents. Indeed, the [^{19}F]fluoro compounds cited were known as far back as 1976, without the [^{18}F]fluoro.

The Office states that it would be obvious to use the [^{18}F]fluorine because "it is well-known in the art that using 18-Fluorine in biomolecules containing fluorine is an important noninvasive technique for studying living tissue by positron emission topography." However, none of the cited references teaches or suggests that fluorinated silane compounds are used in biological applications, or as intermediates in the synthesis of fluoroalkanes.

Thus, there would have been no reason to substitute [^{19}F]fluorine disclosed in the references for [^{18}F]fluorine required in claim 9. In light of the above, Applicants therefore respectfully requests that the rejection of claim 9 be withdrawn.

CONCLUSION

For all the reasons set forth above, an indication of allowance of all claims is solicited. In the event any outstanding issues remain in the Application, the Examiner is more than welcome to telephone the undersigned counsel to resolve any such issues in the interest of expediency and to further place the application in condition for allowance.

Respectfully submitted,

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